

IN THE CLAIMS

Please amend the claims as follows:

1-26. (Canceled)

27. (Currently Amended) ~~[[In a]]~~ A method of developing a latent image formed on an image carrier with toner, comprising:

~~[[by]]~~ causing a developer carrier, which faces said image carrier and accommodates a magnet therein, to support a developer made up of a toner and a magnetic carrier supporting said toner and convey said developer to a developing zone between said developer carrier and said image carrier~~[[,]]~~; and

~~assuming that~~ providing an apparent coating ratio M of a surface of said developer carrier coated with said developer, the apparent coating ration M is, in a zone upstream of said developing zone in a direction of rotation of said developer carrier, expressed as:

$$M = \alpha A + \beta (\%)$$

$$\underline{M = \alpha A^2 + \beta (\%)},$$

where α denotes a coefficient representative of the coating ratio, A2 denotes an amount of developer for a unit area, β denotes a value determined by a powder characteristic of said developer for an apparent coating ratio calculated with $A=0$ A2 = 0, and said coating ratio M is between 90 % and 120 %.

28. (Original) The method as claimed in claim 27, wherein the coating ratio α is 1.6 or below.

29. (Original) The method as claimed in claim 27, wherein a gap for development between said developer carrier and said image carrier is selected to satisfy, in the developing zone, a relation:

$$G_p \times \rho_r \leq 0.7$$

where ρ_r denotes an apparent density of the developer, and G_p denotes a gap for development (cm).

30. (Original) The method as claimed in claim 27, wherein the toner is produced by dissolving or dispersing a toner composition, which contains at least a modified polyester resin with an urea-bond ability and a colorant, in an organic solvent to thereby prepare a dissolution or a dispersion, dispersing said dissolution or said dispersion in a water-based medium to thereby effect polyaddition reaction, and then removing said solvent and rinsing.

31. (Original) The method as claimed in claim 27, wherein the toner has a weight-mean grain size of 4 μm to 8 μm and a grain size distribution satisfying a relation:

$$D_v/D_n < 1.25$$

where D_v denotes the weight-mean grain size, and D_n denotes a number-mean grain size.

32. (Original) The method as claimed in claim 27, wherein the toner has a mean circularity of 0.90 or above, but below 1.00.

33. (Original) The method as claimed in claim 27, wherein the carrier, mixed with the toner, has a volume-mean grain size of 25 μm to 55 μm .

34. (Original) The method as claimed in claim 27, wherein a bias for development comprises a DC bias.

35. (Currently Amended) ~~[[In a]]~~ A developing device for developing a latent image formed on an image carrier with toner ~~by causing, comprising:~~

a developer carrier, which faces said image carrier and accommodates a magnet therein, to support a developer made up of a toner and a magnetic carrier supporting said toner and convey said developer to a developing zone between said developer carrier and said image carrier, ~~assuming that~~

wherein an apparent coating ratio M of a surface of said developer carrier coated with said developer is, in a zone upstream of said developing zone in a direction of rotation of said developer carrier, expressed as:

$$M = \alpha A + \beta (\%)$$

$$M = \alpha A^2 + \beta (\%),$$

where α denotes a coefficient representative of the coating ratio, A2 denotes an amount of developer for a unit area, β denotes a value determined by a powder characteristic of said developer for an apparent coating ratio calculated with ~~A=0~~ A2 = 0, and said coating ratio M is between 90 % and 120 %.

36. (Original) The device as claimed in claim 35, wherein the surface coating ratio M is 1.6 or below.

37. (Original) The device as claimed in claim 35, wherein a gap for development between said developer carrier and said image carrier is selected to satisfy, in the developing zone, a relation:

$$G_p \times \rho_r \leq 0.7$$

where ρ_r denotes an apparent density of the developer, and G_p denotes a gap for development (cm).

38. (Original) The device as claimed in claim 35, wherein the toner is produced by dissolving or dispersing a toner composition, which contains at least a modified polyester resin with an urea-bond ability and a colorant, in an organic solvent to thereby prepare a dissolution or a dispersion, dispersing said dissolution or said dispersion in a water-based medium to thereby effect polyaddition reaction, and then removing said solvent and rinsing.

39. (Original) The device as claimed in claim 35, wherein the toner has a weight-mean grain size of 4 μm to 8 μm and a grain size distribution satisfying a relation:

$$D_v/D_n < 1.25$$

where D_v denotes the weight-mean grain size, and D_n denotes a number-mean grain size.

40. (Original) The device as claimed in claim 35, wherein the toner has a mean circularity of 0.90 or above, but below 1.00.

41. (Original) The device as claimed in claim 35, wherein a carrier, mixed with the toner, has a volume-mean grain size of 25 μm to 55 μm .

42. (Currently Amended) An image forming apparatus comprising:
a photoconductive image carrier configured to allow a latent image to be formed thereon;
a charger configured to uniformly charge said image carrier;
a developing device configured to develop the latent image to thereby produce a toner image; and
an image transferring device configured to transfer the toner image from said image carrier to a recording medium[[:]],

wherein ~~assuming that~~ an apparent coating ratio M of a surface of a developer carrier included in said developing device and coated with said developer is, in a zone upstream of a developing zone in a direction of rotation of said developer carrier, expressed as:

$$M = \alpha A + \beta (\%)$$

$$M = \alpha A^2 + \beta (\%),$$

where α denotes a coefficient representative of the coating ratio, A^2 denotes an amount of developer for a unit area, β denotes a value determined by a powder characteristic of a developer for an apparent coating ratio calculated with ~~$A=0$~~ $A^2=0$, and said coating ratio M is between 90 % and 120 %.

43. (Original) The apparatus as claimed in claim 42, wherein there holds a relation:

$$0 < |VD| - |VB| < |VD - VL| < 400 \text{ (V)}$$

where VD denotes a potential deposited on said image carrier by said charger, VL denotes a potential after exposure, and VB denotes a bias for development.

44. (Original) The apparatus as claimed in claim 42, wherein a bias for development comprises a DC bias.

45. (Currently Amended) In a process cartridge removably mounted to a body of an image forming apparatus and comprising at least one of an image carrier, a charger, a developing device and a cleaning device, said developing device comprising:

a photoconductive image carrier configured to allow a latent image to be formed thereon;

a charger configured to uniformly charge said image carrier;

a developing device configured to develop the latent image to thereby produce a toner image; and

an image transferring device configured to transfer the toner image from said image carrier to a recording medium[[:]],

wherein ~~assuming that~~ an apparent coating ratio M of a surface of a developer carrier included in said developing device and coated with said developer is, in a zone upstream of a developing zone in a direction of rotation of said developer carrier, expressed as:

$$M = \alpha A + \beta (\%)$$

$$M = \alpha A^2 + \beta (\%),$$

where α denotes a coefficient representative of the coating ratio, A2 denotes an amount of developer for a unit area, β denotes a value determined by a powder characteristic of a developer for an apparent coating ratio calculated with $A=0$ A2 = 0, and said coating ratio M is between 90 % and 120 %.